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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/730,839	12/08/2003	Masayuki Ozasa	10873.1358US01	5200
23552	7590	03/08/2005	EXAMINER	
MERCHANT & GOULD PC			TRA, ANH QUAN	
P.O. BOX 2903			ART UNIT	PAPER NUMBER
MINNEAPOLIS, MN 55402-0903			2816	

DATE MAILED: 03/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No.	Applicant(s)	
	10/730,839	OZASA ET AL.	
	Examiner Quan Tra	Art Unit 2816	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 21 January 2005.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-6 is/are pending in the application.
 4a) Of the above claim(s) 1,5 and 6 is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 2-4 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>02/27/04</u> .	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____

DETAILED ACTION

Election/Restrictions

1. This application contains claims directed to the following patentably distinct species of the claimed invention: group I, claim 1, corresponding to figures 1-6; group II, claims 2-4, corresponding to figures 7-13; and group III, claims 5 and 6, corresponding to figures 14-19.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, there is no generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

2. During a telephone conversation with Douglas P. Mueller on March 3, 2005 a provisional election was made with traverse to prosecute the invention of group II, claims 2-4. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1, 5 and 6 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

3. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lafort (USP 6353344) in view of Oguey (USP 5949278).

Lafort's figure 6 shows a current source circuit, comprising: a reference current source (78) supplying a reference current; a first transistor (76) connected in series to the reference current source, and converting the reference current into a voltage; a second transistor (80) having a current mirror relationship with the first transistor, and converting a current into a voltage; an error amplifier (48, 45, 74, 75) receiving a voltage generated in the second transistor

at one input terminal (gate of transistor 48), and comparing the voltage at the one input terminal with a voltage supplied to the other input terminal (gate of 50) to output an error voltage; a voltage source (60, 62) supplying a voltage to the other input terminal of the error amplifier; a fourth transistor (40) connected in series to the second transistor, and driven with an output voltage of the error amplifier; and a fifth transistor (30) driven with the output voltage of the error amplifier. Thus, figure 6 shows all limitations of the claim except for a third transistor having a current mirror relationship with the first transistor, and allowing an output current to flow therethrough. However, Oguey's figure 3 shows a current generating circuit having upper and lower current sources (MP4 and MN6) for generating complementary currents. Therefore, it would have been obvious to one having ordinary skill in the art to add a third transistor coupled in a mirror configuration with Lafort's transistor 76 in order to provide a current that have opposite direction with the current generated by transistor 30.

6. Claim 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lafort (USP 6353344) in view of Oguey (USP 5949278) and Callahan, Jr. (USP 6411159).

The modified Lafort's figure 6 shows all limitations of the claims except for a differential amplifier operated using the current flowing through the third and fifth transistor. Callahan, Jr.'s figure 3 shows a differential amplifier (5, 7, 8) operated using complementary current sources (7 and 8). The complementary current sources of the modified Lafort's figure 6 provide stable currents. Therefore, it would have been obvious to one having ordinary skill in the art to employ the modified Lafort's current sources in Callahan, Jr.'s amplifier.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quan Tra whose telephone number is 571-272-1755. The examiner can normally be reached on 8:00 A.M.-5:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Callahan can be reached on 571-272-1740. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



March 3, 2005

QUAN TRA
PRIMARY EXAMINER